

WHAT IS CLAIMED IS:

1. A multi-mode in-vehicle control unit in a vehicle, comprising:
a first modem to send vehicle data collected from the vehicle over a first transmission network;
a second modem to send vehicle data collected from the vehicle over a second transmission network; and
selection means to determine whether to send the vehicle data using the first transmission network or the second transmission network in accordance with a selection parameter.
2. The multi-mode in-vehicle control unit recited in claim 1, wherein the vehicle data relates to status of the vehicle.
3. The multi-mode in-vehicle control unit recited in claim 1, wherein the vehicle data is emergency data.
4. The multi-mode in-vehicle control unit recited in claim 1, further comprising a third modem to send status data collected from the vehicle over a third transmission network, and wherein the selection means determines whether to send the vehicle data using the first transmission network, the second transmission network or the third transmission network in accordance with the selection parameter.
5. The multi-mode in-vehicle control unit recited in claim 4, wherein the third transmission network is a satellite transmission system, and the third modem is a satellite modem to communicate with the satellite transmission network.
6. The in-vehicle control unit recited in claim 5, wherein the third transmission network is used to transmit vehicle data that is emergency related.
7. A system for managing a fleet of vehicles, comprising:

a multi-mode in-vehicle control unit in one or more of the vehicles in the fleet of vehicles, wherein each in-vehicle control unit comprises:

a first modem to send vehicle data collected from the vehicle over a first transmission network;

a second modem to send status data collected from the vehicle over a second transmission network; and

selection means to determine whether to send the status data using the first transmission network or the second transmission network in accordance with a selection parameter.

8. The system recited in claim 7, further comprising means for resolving conflicts in transmission network usage.

9. The system recited in claim 8, where in the resolving means further comprises means for bumping an in-progress vehicle data transmission.

10. The system recited in claim 7, wherein the vehicle data is vehicle status data.

11. The system recited in claim 7, wherein the vehicle data is related to an emergency.

12. A method for sending vehicle data from an in-vehicle control unit to a processing center, comprising the steps of:

collecting the vehicle data;

determining whether to transmit the vehicle data to a processing center over a first transmission network or a second transmission network; and

transmitting the data to the processing center over the first transmission network using a first modem if the determining step determines that the vehicle data should be transmitted over the first transmission network; and

transmitting the data to the processing center over the second transmission network using a second modem if the determining step determines that the vehicle data should be transmitted over the second transmission network.

13. The method recited in claim 12, further comprising the step of collecting vehicle status data.

14. The method recited in claim 12, further comprising the step of collecting vehicle data related to an emergency.

15. The method recited in claim 14, further comprising the step of resolving a transmission network usage conflict.

16. The method recited in claim 15, further comprising the step of bumping an in-progress transmission of vehicle data.

17. A method for managing a fleet of vehicles, comprising the steps of:
placing an in-vehicle control unit in every vehicle in the fleet of vehicles, wherein at least one of the in-vehicle control units is a multi-mode in-vehicle control unit;
collecting vehicle data for each vehicle in the fleet;
transmitting the vehicle data to a processing center; and
analyzing the vehicle data to generate routing schedules to route the vehicles in the fleet.

18. The method recited in claim 17, wherein each multi-mode ICU performs the steps of:
determining whether to transmit the vehicle data to a processing center over a first transmission network or a second transmission network; and

transmitting the data to the processing center over the first transmission network using a first modem if the determining step determines that the vehicle data should be transmitted over the first transmission network; and

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transmitting the data to the processing center over the second transmission network using a second modem if the determining step determines that the vehicle data should be transmitted over the second transmission network.

19. The method recited in claim 17, further comprising the steps of:

determining a percentage of the vehicles in the fleet that is not covered by a particular transmission network; and

placing multi-mode in-vehicle control units only in a number of vehicles in the fleet corresponding to the percentage of the vehicles in the fleet not covered by the particular transmission network.

20. The method recited in claim 17, further comprising the step of logging vehicle data that cannot be transmitted to the processing center in real-time or near real-time.

21. The method recited in claim 17, further comprising the step of logging vehicle data that cannot be transmitting over a highest priority transmission network.

22. The method recited in claim 17, further comprising the steps of:

logging the vehicle data; and

transmitting the vehicle data a later time when costs are reduced.

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